Mark Gordon, Governor

Department of Environmental Quality

To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.

DEQ

Todd Parfitt, Director

February 10, 2020

Mr. Carl Daly
Acting Director, Air and Radiation Division
U.S. EPA Region 8
1595 Wynkoop St.
Denver, CO 80202

Re: Initial Notification of PM_{10} Exceptional Events in 2018

Dear Mr. Daly,

Attached are initial notifications of high wind blowing dust exceptional events that occurred in Wyoming in 2018 that led to exceedances of the 24-hour PM_{10} NAAQS at five (5) industrial monitors. The Wyoming Department of Environmental Quality – Air Quality Division (AQD) has evaluated the initial notifications and circumstances surrounding these events and represents that they should be evaluated by Region 8 as possible exceptional events. The exceedances covered by these initial notifications are summarized in the table below.

Date	AQS ID	Monitor Name	Owner	24-Hour PM_{10} Concentrati ($\mu g/m^3$)
2/3/2018	56-037-0868	Pit 10	Black Butte Coal Company	169.0
2/4/2018	56-037-0868	Pit 10		155.1
2/15/2018	56-037-0868	Pit 10		166.2
3/5/2018	56-005-0891	36 Site	Thunder Basin Coal Company	179.3
4/2/2018	56-037-0866	866A	Genesis Alkali Westvaco	279.5
5/17/2018	56-005-6666	6 Site	Wyodak Resources Development Corp.	287.0
9/24/2018	56-037-0868	Pit 10	Black Butte Coal Company	193.6
11/2/2018	56-037-0898	Downwind	Ciner Wyoming LLC	192.3

The AQD would like to request that the Administrator determine these possible events meet the provisions of 40 CFR 50.14 (a) (1) (F) as a regulatory determination made on a case by case basis. The AQD considers these events to be of regulatory significance because of the AQD's reliance on ambient data to determine compliance with the NAAQS at Powder River Basin

(PRB) coal mines and other industrial facilities, the use of ambient data in AQD's permitting process, and third party interests. These reasons demonstrate the need to accurately portray anthropogenic versus non-anthropogenic or "exceptional" air quality issues to the public by means of excluding exceptional event concurred data from the data record.

In 1993 the AQD and EPA Region 8 signed a Memorandum of Agreement (MOA) to rely on ambient monitoring data at PRB coal mines to determine compliance with the 24-hour PM_{10} NAAQS under the AQD's permitting process, rather than modeling potential 24-hour PM_{10} impacts. In the decades since, the AQD has applied this same principal to other facilities across the state to demonstrate compliance with the 24-hour PM_{10} NAAQS. The exceedances that the AQD is requesting Region 8 to review occurred at PRB mining facilities or that otherwise have permit conditions requiring them to demonstrate compliance with the PM_{10} NAAQS through the operation of PM_{10} monitoring networks. The AQD reports these data to EPA Region 8 through EPA's AQS database. Because the effectiveness of the MOA and AQD's permitting and compliance programs are contingent on the lack of PM_{10} NAAQS violations in the PRB and at required industrial monitoring stations, correctly reporting these data to EPA and AQS by placing exceptional event flags on these data is essential. The Region must take the appropriate steps to review and issue concurrence or non-concurrence on these data to accurately reflect the design value statistics in AQS and therefore accurately represent compliance with the NAAQS.

As mentioned above, the AQD relies on ambient industrial PM_{10} data at facilities to determine compliance with the 24-hour NAAQS in the permitting process. It is critical that exceedances and violations of the NAAQS are properly characterized in the permit analysis as being anthropogenic or exceptional in nature. The AQD cannot issue a permit to a source that will cause or contribute to a violation of the NAAQS. For facilities that cannot model their potential permitting action, the AQD must rely on the ambient data record to prove compliance with the NAAQS. In order to rely on these monitoring data for permitting actions, exceptional events must be properly characterized in the data record and must be documented to EPA per 40 CFR 50.14.

It is also the AQD's stance that any exceedance caused by an exceptional event is significant and that it is important to demonstrate to the public the difference between exceedances that are anthropogenic versus those that are non-anthropogenic or exceptional in nature. Properly characterizing these exceedances in the public record and providing scientific evidence supporting the claim of exceptionality is essential to our shared role of serving the public. These data are used by the public, researchers, and other agencies to make scientific, public health, and policy decisions. These data must be properly flagged and concurred with in the EPA's AQS in

order for those data to be handled correctly and reflect the monitor design values. Without the critical step of determining concurrence, data is often misused by these entities to support decisions.

Due to the above mentioned factors, the AQD considers these exceedances to meet the criteria of regulatory significance and requests that the Administrator make a determination under 40 CFR 50.14 (a) (1) (F) that the EPA will agree to review exceptional event demonstrations for these events.

Please contact Cara Keslar, Monitoring Section Supervisor, with questions at 307-777-8684.

Sincerely,

Darla J. Potter
Air Quality Resource Program Manager
Air Quality Division

Cc: Cara Keslar, AQD
Lecia Craft, Thunder Basin Coal Company
John Lucas, Genesis Alkali Wyoming
Shane Gasvoda, Wyodak Resources Development Corp.
Steve Gili, Black Butte Coal Company
Tyler Schiltz, Ciner Wyoming LLC

EE Initial Notification Summary Information PM_{10} Template

Submitting Agency: Wyoming Department of Environmental Quality
Agency Contact: Cara Keslar
Date Submitted: Feb. 04, 2020
Applicable NAAQS: 1987 PM10
Affected Regulatory Decision[1]: Attainment Date Extension for 1987 PM10
(for classification decisions, specify level of the classification with/without EE concurrence)
Area Name/Designation Status: Black Butte Mine Attainment/Unclassified
Design Value Period (list three year period): 2016-2018
(where there are multiple relevant design value periods, summarize separately)

A) Information specific to each flagged monitor day that may be submitted to EPA in support of the affected regulatory decision listed above

Date of Event	Type of Event (high wind, volcano, wildfires/prescribed fire, other[2])	AQS Flag	Monitor AQS ID (and POC)	Monitor Name	Exceedance Concentration (with units)	Notes (e.g. event name, links to other events)
September 24, 2018	**High wind**	**RJ**	**56-037-0868 -2**	**Pit 10**	**193.6 µg/m3**	**Black Butte Mine High Wind Exceptional Event Sept 24,**
February 3, 2018	**High wind**	**RJ**	**56-037-0868-2**	**Pit 10**	**177.8 µg/m3**	**Black Butte Mine High Wind Exceptional Event Feb 3-4, 2018**
February 4, 2018	**High wind**	**RJ**	**56-037-0868-2**	**Pit 10**	**155.1 µg/m3**	**Black Butte Mine High Wind Exceptional Event Feb 3-4, 2018**
February 15, 2018	**High wind**	**RJ**	**56-037-0868-2**	**Pit 10**	**166.2 µg/m3**	**Black Butte Mine High Wind Exceptional Event Feb 15, 2018**

B) Violating Monitors Information

(listing of all violating monitors in the planning area, regardless of operating agency, and regardless of whether or not they are impacted by EEs)

Monitor (AQS ID and POC)	Design Value (without EPA concurrence on any of the events listed in table A above)	Design Value (with EPA concurrence on all events listed in table A above)
56-037-0868-2	2.1	0.3

[1] designation, classification, attainment determination, attainment date extension, or finding of SIP inadequacy leading to SIP call
[2] Provide additional information for types of event described as "other"

C) Summary of Maximum Design Value (DV) Monitor Information (Effect of EPA Concurrence on Maximum Design Value Monitor Determination)

(Two highest values from Table B)

Maximum DV monitor (AQS ID and POC) **without EPA concurrence** on any of the events listed in table A above	Design Value 2.1	Design Value Monitor **56-03-0868-2**	Comment
Maximum DV monitor (AQS ID and POC) **with EPA concurrence** on all events listed in table A above	Design Value 0.3	Design Value Monitor **56-03-0868-2**	Comment

D) List of any monitors (AQS ID and POC) within planning area with invalid design values (e.g. due to data incompleteness)

EE Initial Notification Summary Information

PM_{10} Exceedance

Submitting Agency: State of Wyoming – Air Quality Division
Agency Contact: Cara Keslar
Date Submitted:
Applicable NAAQS: 1987 PM_{10} 24-hr precision PM10 monitoring - 150μg /m^3 Limit
Affected Regulatory Decision[1]: (AQD will fill this section out per 50.14, option F)
(for classification decisions, specify level of the classification with/without EE concurrence)
Area Name/Designation Status: Attainment/Unclassifiable
Design Value Period (list three year period): 2015-2017
(where there are multiple relevant design value periods, summarize separately)

A) Information specific to each flagged monitor day that may be submitted to EPA in support of the affected regulatory decision listed above

Date of Event	Type of Event (high wind, volcano, wildfires/prescribed fire, other[2])	AQS Flag	Monitor AQS ID (and POC)	Monitor Name	Exceedance Concentration (with units)	Notes (e.g. event name, links to other events)
December 19, 2016	High Wind	IJ	56-005-0891-2	36-Site 1400ab TEOM	163.1 μg /m^3	South Powder River Basin High Wind Dust Exceptional Event Demonstration: December 19, 2016, not yet submitted to EPA. WY AQD High Wind Event Concurrence granted.
September 3, 2017	Wildfires	IT	56-005-0891-2	36-Site 1400ab TEOM	**155.9** μg /m^3	PRB/Black Thunder Mine Wildfire Exceptional Event Demonstration: September 3, 2017, not yet submitted to EPA. WY AQD Wildfire Concurrence granted.
March 5, 2018	High Wind	IJ	56-005-0891-2	36-Site 1400ab TEOM	**179.3** μg /m^3	High Wind Dust Exceptional Event Demonstration: March 5, 2018, will be submitted.

B) Violating Monitors Information

(listing of all violating monitors in the planning area, regardless of operating agency, and regardless of whether or not they are impacted by EEs)

Monitor (AQS ID and POC)	Design Value (without EPA concurrence on any of the events listed in table A above)	Design Value (with EPA concurrence on all events listed in table A above)
Black Thunder Mine 36-Site 1400ab TEOM (56-005-0891-2)	1.0	0.0

[1] designation, classification, attainment determination, attainment date extension, or finding of SIP inadequacy leading to SIP call

[2] Provide additional information for types of event described as "other"

C) Summary of Maximum Design Value (DV) Monitor Information (Effect of EPA Concurrence on Maximum Design Value Monitor Determination)

(Two highest values from Table B)

Maximum DV monitor (AQS ID and POC) **without EPA concurrence** on any of the events listed in table A above	Design Value 1.0	Design Value Monitor Black Thunder Mine 36-Site 1400ab TEOM (56-005-0891-2)	Comment
Maximum DV monitor (AQS ID and POC) **with EPA concurrence** on all events listed in table A above	Design Value 0.0	Design Value Monitor Black Thunder Mine 36-Site 1400ab TEOM (56-005-0891-2)	Comment

D) List of any monitors (AQS ID and POC) within planning area with invalid design values (e.g. due to data incompleteness)

Year	Quarter	Exceedances	Valid Days	Poss Days	Estimated Exceedances**	Yearly Expected	w/EPA Concurrence*
2015	1	0			0.0		
	2	0			0.0		
	3	0			0.0		
	4	0			0.0	0.0	
2016	1	0			0.0		
	2	0			0.0		
	3	0			0.0		
	4	1			1.0	1.0	
2017	1	0			0.0		
	2	0			0.0		
	3	1			1.0		
	4	0			0.0	1.0	
2018	1	1			1.0		
	2	0			0.0		
	3	0			0.0		
	4	0			0.0	1.0	
3YR TOTAL						1.0	0.0

* Since both exceedances are associated with Exceptional Event Demonstrations, the DV with EPA concurrence would be zero

** if the first exceedance is observed in a calendar quarter in which the monitor is already sampling every day, no adjustment for missing data will be made to the first exceedance if a 75 percent data capture rate was achieved in the quarter in which it was observed. (note: 1st exceedance is interpreted as 1st in calendar year)

EE Initial Notification Summary Information — PM_{10} Exceedance

Submitting Agency: State of Wyoming – Air Quality Division
Agency Contact: Cara Keslar
Date Submitted:
Applicable NAAQS: 1987 PM_{10} 24-hr precision PM10 monitoring - 150µg /m^3 Limit
Affected Regulatory Decision[1]: (AQD will fill this section out per 50.14, option F)
(for classification decisions, specify level of the classification with/without EE concurrence)
Area Name/Designation Status: Attainment/Unclassifiable
Design Value Period (list three year period): 2nd Quarter 2015 to 2nd quarter 2018
(where there are multiple relevant design value periods, summarize separately)

A) Information specific to each flagged monitor day that may be submitted to EPA in support of the affected regulatory decision listed above

Date of Event	Type of Event (high wind, volcano, wildfires/prescribed fire, other[2])	AQS Flag	Monitor AQS ID (and POC)	Monitor Name	Exceedance Concentration (with units)	Notes (e.g. event name, links to other events)
April 2, 2018	High Wind	RJ	56-037-0866-1	Genesis Alkali Westvaco Lo-Vol Sampler 866-A	279.2 µg /m^3	Site 866-A High Wind Dust Exceptional Event Demonstration: April 2, 2018, not yet submitted

B) Violating Monitors Information

(listing of all violating monitors in the planning area, regardless of operating agency, and regardless of whether or not they are impacted by EEs)

Monitor (AQS ID and POC)	Design Value (without EPA concurrence on any of the events listed in table A above)	Design Value (with EPA concurrence on all events listed in table A above)
Genesis Alkali Westvaco Lo-Vol Sampler 866-A Site 56-037-0866-1	0.3	0.0

[1] designation, classification, attainment determination, attainment date extension, or finding of SIP inadequacy leading to SIP call

[2] Provide additional information for types of event described as "other"

C) Summary of Maximum Design Value (DV) Monitor Information (Effect of EPA Concurrence on Maximum Design Value Monitor Determination)

(Two highest values from Table B)

Maximum DV monitor (AQS ID and POC) **without EPA concurrence** on any of the events listed in table A above	Design Value 0.3	Design Value Monitor Genesis Alkali Westvaco Lo-Vol Sampler 866-A Site 56-037-0866-1	Comment
Maximum DV monitor (AQS ID and POC) **with EPA concurrence** on all events listed in table A above	Design Value 0.0	Design Value Monitor Genesis Alkali Westvaco Lo-Vol Sampler 866-A Site 56-037-0866-1	Comment

D) List of any monitors (AQS ID and POC) within planning area with invalid design values (e.g. due to data incompleteness)

Year	Quarter	Exceedances	Valid Days	Poss Days	Estimated Exceedances**	Yearly Expected	w/EPA Concurrence*
2015	2	0			0.0		
	3	0			0.0		
	4	0			0.0	0.0	
2016	1	0			0.0		
	2	0			0.0		
	3	0			0.0		
	4	0			0.0	0.0	
2017	1	0			0.0		
	2	0			0.0		
	3	0			0.0		
	4	0			0.0	0.0	
2018	1	0			0.0		
	2	1			1.0	1.0	
3YR TOTAL						0.3	0.0

* Since all exceedances are associated with Exceptional Event Demonstrations, the DV with EPA concurrence would be zero

** if the first exceedance is observed in a calendar quarter in which the monitor is already sampling every day, no adjustment for missing data will be made to the first exceedance if a 75 percent data capture rate was achieved in the quarter in which it was observed. (note: 1st exceedance is interpreted as 1st in calendar year)

EE Initial Notification Summary Information PM_{10} Exceedance

Submitting Agency: State of Wyoming – Air Quality Division
Agency Contact: Cara Keslar
Date Submitted:
Applicable NAAQS: 1987 PM_{10} 24-hr precision PM10 monitoring - 150µg /m^3 Limit
Affected Regulatory Decision[1]: (AQD will fill this section out per 50.14, option F)
(for classification decisions, specify level of the classification with/without EE concurrence)
Area Name/Designation Status: Attainment/Unclassifiable
Design Value Period (list three year period): 2015 Q2 -2018 Q1
(where there are multiple relevant design value periods, summarize separately)

A) Information specific to each flagged monitor day that may be submitted to EPA in support of the affected regulatory decision listed above

Date of Event	Type of Event (high wind, volcano, wildfires/prescribed fire, other[2])	AQS Flag	Monitor AQS ID (and POC)	Monitor Name	Exceedance Concentration (with units)	Notes (e.g. event name, links to other events)
November 18, 2015	High Wind	IT	56-005-6666-1	6-Site 1400ab TEOM	**350.7** µg /m^3	Wyodak Exceptional Event Demonstration: November 18, 2015, submitted to EPA but not approved
May 17, 2018	High Wind	IT	56-005-6666-1	6-Site 1400ab TEOM	**287.0** µg /m^3	High Wind Dust Exceptional Event Demonstration: May 17, 2018, not yet submitted to EPA

B) Violating Monitors Information

(listing of all violating monitors in the planning area, regardless of operating agency, and regardless of whether or not they are impacted by EEs)

Monitor (AQS ID and POC)	Design Value (without EPA concurrence on any of the events listed in table A above)	Design Value (with EPA concurrence on all events listed in table A above)
Wyodak Mine 6-Site 1400ab TEOM (56-005-6666-1)	0.7	0.0

[1] designation, classification, attainment determination, attainment date extension, or finding of SIP inadequacy leading to SIP call
[2] Provide additional information for types of event described as "other"

C) Summary of Maximum Design Value (DV) Monitor Information (Effect of EPA Concurrence on Maximum Design Value Monitor Determination)

(Two highest values from Table B)

Maximum DV monitor (AQS ID and POC) **<u>without</u> EPA concurrence** on any of the events listed in table A above	Design Value 0.7	Design Value Monitor Wyodak Mine 6-Site 1400ab TEOM (56-005-6666-1)	Comment
Maximum DV monitor (AQS ID and POC) **<u>with</u> EPA concurrence** on all events listed in table A above	Design Value 0.0	Design Value Monitor Wyodak Mine 6-Site 1400ab TEOM (56-005-6666-1)	Comment

D) List of any monitors (AQS ID and POC) within planning area with invalid design values (e.g. due to data incompleteness)

Year	Quarter	Exceedances	Valid Days	Poss Days	Estimated Exceedances**	Yearly Expected	w/EPA Concurrence*
2015	1	0			0.0		
	2	0			0.0		
	3	0			0.0		
	4	0			0.0	0.0	
2016	1	0			0.0		
	2	0			0.0		
	3	0			0.0		
	4	1			1.0	1.0	
2017	1	0			0.0		
	2	0			0.0		
	3	0			0.0		
	4	0			0.0	0.0	
2018	1	1			1.0		
	2	0			0.0		
	3	0			0.0		
	4	0			0.0	1.0	
3YR TOTAL						0.7	0.0

* Since both exceedances are associated with Exceptional Event Demonstrations, the DV with EPA concurrence would be zero

** if the first exceedance is observed in a calendar quarter in which the monitor is already sampling every day, no adjustment for missing data will be made to the first exceedance if a 75 percent data capture rate was achieved in the quarter in which it was observed. (note: 1st exceedance is interpreted as 1st in calendar year)

EE Initial Notification Summary Information

PM_{10} Template

Submitting Agency: State of Wyoming – Air Quality Division
Agency Contact: Cara Keslar
Date Submitted:
Applicable NAAQS: 1987 PM_{10} 24-hour precision PM monitor – 150 µg/m^3 Limit
Affected Regulatory Decision[1]:
(for classification decisions, specify level of the classification with/without EE concurrence)
Area Name/Designation Status: Attainment/Unclassifiable
Design Value Period (list three year period): 2016-2018
(where there are multiple relevant design value periods, summarize separately)

A) Information specific to each flagged monitor day that may be submitted to EPA in support of the affected regulatory decision listed above

Date of Event	Type of Event (high wind, volcano, wildfires/prescribed fire, other[2])	AQS Flag	Monitor AQS ID (and POC)	Monitor Name	Exceedance Concentration (with units)	Notes (e.g. event name, links to other events)
June 9, 2017	High Wind	RJ	56-037-0898	Ciner Downwind Met One BAM-1020	175µg/m^3	Exceptional Event Demonstration for the June 9, 2017 PM_{10} Exceedance due to High Winds, not yet submitted to EPA
October 20, 2017	High Wind	RJ	56-037-0898	Ciner Downwind Met One BAM-1020	272.9µg/m^3	Exceptional Event Demonstration for the October 20, 2017 PM_{10} Exceedance due to High Winds, not yet submitted to EPA
November 1, 2017	High Wind	RJ	56-037-0898	Ciner Downwind Met One BAM-1020	259.5µg/m^3	Exceptional Event Demonstration for the November 1, 2017 PM_{10} Exceedance due to High Winds, not yet submitted to EPA
November 2, 2018	High Wind	RJ	56-037-0898	Ciner Downwind Met One BAM-1020	192.3 µg/m^3	Exceptional Event Demonstration for the November 2, 2018 PM_{10} Exceedance due to High Winds, not yet submitted to EPA

B) Violating Monitors Information

(listing of all violating monitors in the planning area, regardless of operating agency, and regardless of whether or not they are impacted by EEs)

Monitor (AQS ID and POC)	Design Value (without EPA concurrence on any of the events listed in table A above)	Design Value (with EPA concurrence on all events listed in table A above)
Ciner Downwind Met One BAM-1020 (56-037-0898-4)	1.3	0

[1] designation, classification, attainment determination, attainment date extension, or finding of SIP inadequacy leading to SIP call

[2] Provide additional information for types of event described as "other"

C) Summary of Maximum Design Value (DV) Monitor Information (Effect of EPA Concurrence on Maximum Design Value Monitor Determination)
(Two highest values from Table B)

Maximum DV monitor (AQS ID and POC) **without EPA concurrence** on any of the events listed in table A above	Design Value 1.3	Design Value Monitor **Ciner Downwind Met One BAM-1020 (56-037-0898-4)**	Comment
Maximum DV monitor (AQS ID and POC) **with EPA concurrence** on all events listed in table A above	Design Value 0	Design Value Monitor **Ciner Downwind Met One BAM-1020 (56-037-0898-4)**	Comment

D) List of any monitors (AQS ID and POC) within planning area with invalid design values (e.g. due to data incompleteness)